CLAIMS

1.   (Currently amended) A method for comprising:

receiving a data frame at a first communications protocol software module;

allocating a memory buffer in which to store at least some portion of the data

frame ~~from a pool of available memory buffers~~, the memory buffer pointed

to by a pointer associated with a first communication protocol software

module (CPSM);

storing the at least some portion of the data frame in the memory buffer;

~~providing at least one pointer to the memory buffer to the first communications~~

~~protocol software module, the first communications protocol software~~

~~module~~ accessing the at least some portion of the data frame in the memory

buffer pointed to by the pointer associated with the first CPSM to process

the data frame by the first CPSM;

transferring the pointer associated with the first CPSM ~~control of processing the~~

~~data frame from the first communications protocol software module~~ from

the first CPSM to associate with a second ~~communications protocol~~

~~software module~~ CPSM and thus transferring control of processing the data

frame in the memory buffer from the first CPSM to the second CPSM; and

~~providing the pointer to the memory buffer to the second communications~~

~~protocol software module, the second communications protocol software~~

~~module~~ accessing the at least some portion of data frame in the memory

buffer pointed to by the pointer associated with the second CPSM to

process the data frame by the second CPSM.

2.   (Original) The method of claim 1, wherein allocating a memory buffer in which to
store the at least some portion of the data frame comprises allocating a memory buffer

from a pool of available memory buffers in which to store the at least some portion of the data frame.

3. (Currently Amended) The method of claim 1, wherein ~~providing at least one pointer to the memory buffer to the first communications protocol software module, the first communications protocol software module~~ accessing the data frame in the memory buffer pointed to by the pointer <u>associated with the first CPSM</u> to process the data frame, comprises providing a first pointer to a beginning of the memory buffer and a second pointer to an ending of the memory buffer.

4. (Original) The method of claim 3, further providing a length of the memory buffer to the first communications protocol module.

5. (Original) The method of claim 1, further comprising returning the memory buffer to the pool of available memory buffers when processing of the data frame is completed.

6. (Original) The method of claim 5, wherein returning the memory buffer to the pool of available memory buffers when processing of the data frame is completed, comprises inserting the pointer to the memory buffer in to a linked list of available memory buffers.

7. (Cancelled) ~~The method of claim 1, further comprising:~~
~~allocating a second memory buffer from a pool of available memory buffers in which to store at least some portion of the data frame, as needed for the communications protocol software module to process the data frame;~~
~~storing at least some portion of the data frame in the second memory buffer; and~~

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providing at least one pointer to the second memory buffer to the communications protocol software module, the communications protocol software module accessing the at least some portion of the data frame in the memory buffer pointed to by the pointer to process the data frame.

8.   (Currently Amended) A apparatus comprising:

means for receiving a data frame at a first communications protocol software module;

means for allocating a memory buffer in which to store at least some portion of the data frame from a pool of available memory buffers, the memory buffer pointed to by a pointer associated with a first communication protocol software module (CPSM);

means for storing the at least some portion of the data frame in the memory buffer;

means for providing at least one pointer to the memory buffer to the first communications protocol software module, the first communications protocol software module accessing the at least some portion of the data frame in the memory buffer pointed to by the pointer associated with the first CPSM to process the data frame by the first CPSM;

means for transferring the pointer associated with the first CPSM control of processing the data frame from the first communications protocol software module from the first CPSM to associate with a second communications protocol software module CPSM and thus transferring control of processing the data frame in the memory buffer from the first CPSM to the second CPSM; and

means for providing the pointer to the memory buffer to the second communications protocol software module, the second communications

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~~protocol software module~~ accessing the at least some portion of data frame in the memory buffer pointed to by the pointer <u>associated with the second CPSM</u> to process the data frame <u>by the second CPSM</u>.

9.   (Original) The apparatus of claim 8, wherein the means for allocating a memory buffer in which to store the at least some portion of the data frame comprises means for allocating a memory buffer from a pool of available memory buffers in which to store the at least some portion of the data frame.

10.   (Original) The apparatus of claim 8, wherein the means for ~~providing at least one pointer to the memory buffer to the first communications protocol software module, the first communications protocol software module~~ accessing the data frame in the memory buffer pointed to by the pointer <u>associated with the first CPSM</u> to process the data frame, comprises means for providing a first pointer to a beginning of the memory buffer and a second pointer to an ending of the memory buffer.

11.   (Original) The apparatus of claim 10, further providing a length of the memory buffer to the first communications protocol module.

12.   (Original) The apparatus of claim 8, further comprising means for returning the memory buffer to the pool of available memory buffers when processing of the data frame is completed.

13.   (Original) The apparatus of claim 12, wherein the means for returning the memory buffer to the pool of available memory buffers when processing of the data frame is completed, comprises means for inserting the pointer to the memory buffer in to a linked list of available memory buffers.

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14.   (Cancelled) ~~The apparatus of claim 8, further comprising:~~

~~means for allocating a second memory buffer from a pool of available memory~~
~~buffers in which to store at least some portion of the data frame, as needed~~
~~for the communications protocol software module to process the data~~
~~frame;~~

~~means for storing at least some portion of the data frame in the second memory~~
~~buffer; and~~

~~means for providing at least one pointer to the second memory buffer to the~~
~~communications protocol software module, the communications protocol~~
~~software module accessing the at least some portion of the data frame in~~
~~the memory buffer pointed to by the pointer to process the data frame.~~

15.   (Currently Amended) An article of manufacture, comprising:

a machine accessible medium, the machine accessible medium providing

instructions, that when executed by a machine, cause the machine to:

receive a data frame at a first communications protocol software module;

allocate a memory buffer in which to store at least some portion of the data

frame ~~from a pool of available memory buffers,~~ the memory buffer

pointed to by a pointer associated with a first communication

protocol software module (CPSM);;

store the at least some portion of the data frame in the memory buffer;

~~provide at least one pointer to the memory buffer to the first~~

~~communications protocol software module, the first~~

~~communications protocol software module~~ access the at least some

portion of the data frame in the memory buffer pointed to by the

pointer <u>associated with the first CPSM</u> to process the data frame <u>by</u>
<u>the first CPSM</u>;

transfer <u>the pointer associated with the first CPSM</u> ~~control of processing~~

~~the data frame from the first communications protocol software~~

~~module~~ <u>from the first CPSM</u> to <u>associate with</u> a second

~~communications protocol software module~~ <u>CPSM and thus transfer</u>

<u>control of processing the data frame in the memory buffer from the</u>

<u>first CPSM to the second CPSM</u>; and

~~provide the pointer to the memory buffer to the second communications~~

~~protocol software module, the second communications protocol~~

~~software module~~ access the at least some portion of data frame in

the memory buffer pointed to by the pointer <u>associated with the</u>

<u>second CPSM</u> to process the data frame <u>by the second CPSM</u>.

16.   (Original) The article of manufacture of claim 15, wherein the machine readable
instructions, that when executed by a machine, cause the machine to allocate a memory
buffer in which to store the at least some portion of the data frame, cause the machine to
allocate a memory buffer from a pool of available memory buffers in which to store the at
least some portion of the data frame.

17.   (Currently Amended) The article of manufacture of claim 15, wherein the
machine readable instructions, that when executed by a machine, cause the machine to
~~provide at least one pointer to the memory buffer to the first communications protocol~~
~~software module, the first communications protocol software module~~ access[[ing]] the
data frame in the memory buffer pointed to by the pointer <u>associated with the first CPSM</u>
to process the data frame, cause the machine to provide a first pointer to a beginning of
the memory buffer and a second pointer to an ending of the memory buffer.

18.   (Original) The article of manufacture of claim 17, further comprising machine readable instructions, that when executed by a machine, cause the machine to provide a length of the memory buffer to the first communications protocol module.

19.   (Original) The article of manufacture of claim 15, further comprising machine readable instructions, that when executed by a machine, cause the machine to return the memory buffer to the pool of available memory buffers when processing of the data frame is completed.

20.   (Original) The article of manufacture of claim 19, wherein the machine readable instructions, that when executed by a machine, cause the machine to return the memory buffer to the pool of available memory buffers when processing of the data frame is completed, cause the machine to insert the pointer to the memory buffer in to a linked list of available memory buffers.

21.   (Cancelled) ~~The article of manufacture of claim 15, further comprising machine readable instructions, that when executed by a machine, cause the machine to:~~
~~allocate a second memory buffer from a pool of available memory buffers in which to store at least some portion of the data frame, as needed for the communications protocol software module to process the data frame;~~
~~store at least some portion of the data frame in the second memory buffer; and~~
~~provide at least one pointer to the second memory buffer to the communications protocol software module, the communications protocol software module accessing the at least some portion of the data frame in the memory buffer pointed to by the pointer to process the data frame.~~